

In re Application of GEIDL

Serial No. 09/976,188

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-2, 6, 9-12, 14-15, 17-20, 23, and 25-29 under 35 U.S.C. § 102(b) as being anticipated by *Quantitative Results Comparing Three Intelligent Interfaces for Information Capture: A Case Study Adding Name Information into an Electronic Personal Organizer*, published in the December 1996 issue of the *Journal of Artificial Intelligence Research* 5 by Schlimmer et al. ("Schlimmer"). Further, the Office action rejected claims 3-5, 7-8, 16, 21-22, and 30-33 under 35 U.S.C. § 103(a) as being unpatentable over Schlimmer in view of U.S. Patent No. 5,956,423 to Frink et al. ("Frink"). Further yet, the Office objected to the abstract as being longer than 150 words. Regarding the abstract, applicant respectfully disagrees as the abstract, in its current length, is 149 words and, thus, within the 150 word limit on length. Applicant submits that the abstract is acceptable in its current form and no correction is required. Regarding the claim rejections, applicant respectfully disagrees.

By present amendment, claim 1 has been amended for clarification and not in view of the prior art. Applicant submits that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Applicant thanks the Examiner for the interview held (by telephone) on June 23, 2004. During the interview, the Examiner and applicant's attorney discussed

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the claims with respect to the prior art. The essence of applicant's position is incorporated in the remarks below.

Prior to discussing reasons why applicant believes that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed to a system and method for facilitating the input of handwritten data into a computing environment. In one embodiment, a first program executing in the computer environment is able to evaluate various fields of a second program also executing in the computer environment to determine whether or not handwritten data may be input into said field. As such, the first program displays a semi-transparent user input interface relative to an application's currently focused input field at times when handwritten input is appropriate. The semi-transparent user interface is displayed when a text input field receives focus, *i.e.*, the application is ready to receive input. Thus, the user interface, which is displayed either over the top of or near the input field, may receive handwritten data, while at the same time, the input field may still receive typed data. In this manner, a user may enter information to the field through simple typing or through handwriting that uses a recognition engine to provide data to the field as well.

The semi-transparent input field can grow as needed to receive input, or will disappear when not used for a time. Handwritten data is recognized and passed to the application as if it was typed in the focused field, and the application need not be aware that handwriting may be used to enter data, as the system and method are external to the application. Pen events that are not handwriting, but comprise

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gestures directed to the program through the semi-transparent input user interface, may also be detected by a gesture detection engine and sent to the application. A user is, thus, guided to enter handwriting, while handwriting recognition appears to be built into applications, whether or not those applications are aware of handwriting capabilities. Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

Claim Rejections under §102

Turning to the claims, amended claim 1 recites in a computing device having an executing program, a method comprising evaluating a program field that has focus against information indicative of whether the field is configured to receive text input and if the field is configured to receive text input: 1) providing a visible user input interface at a displayed location relative to the field such that the user input interface is operable to receive handwritten data while the field is operable to receive input data, 2) receiving handwritten data at the input interface, 3) providing the handwritten data to a recognition engine, and 4) returning a recognition result to the program.

The Office action rejected claim 1 as being anticipated by Schlimmer. More specifically, the Office action contends that Schlimmer teaches evaluating a program field that has focus against information indicative of whether the field is configured to receive text input. Section 2 on pages 330 and 331 of Schlimmer is referenced. Further, the Office action contends that Schlimmer teaches if the field is configured to receive text input, providing a visible user input interface at a

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displayed location relative to the field. Again, section 2 on pages 330 and 331 of Schlimmer is referenced. Still further, the Office action contends that Schlimmer teaches receiving handwritten data at the input interface, providing the handwritten data to a recognition engine, and returning a recognition result to the program. Yet again, section 2 on pages 330 and 331 of Schlimmer is referenced. Applicant respectfully disagrees.

Schlimmer is directed, generally, to a system and method for inputting data into a computing device via handwriting techniques. More specifically, Schlimmer teaches, albeit in a limited manner and in the context of a study, a program that has the ability to recognize handwriting and convert the handwritten data into textual data. As such, according to the teachings of Schlimmer, a user may "double-tap" a box in an input field that expands the input field as if it were over the top of the original location of the input field. Once the input field has been expanded, a user may enter handwriting into the input field and a recognition engine is able to convert the handwriting data to textual data.

Schlimmer, however, is merely an example of the prior art which has been described in the background section of the patent application. That is, this is an example of an application that has a handwriting data recognition engine already part of the entire application. Furthermore, the input field must be expanded by a user double tapping a field into which it is desired to have data entered. To the extent that Schlimmer teaches a handwriting recognition system, it merely teaches a system that may have data entered into its own application. That is, the program

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of Schlimmer cannot be applied to an entirely separate application such that handwriting recognition can be extended to any program having an input field.

In contrast, the method of claim 1 recites evaluating a program field that has focus against information indicative of whether the field is configured to receive text input. That is, an input field of any program may be assessed as to whether text input may be received and may be done so without any user intervention, such as double tapping a tab on a field.

Furthermore, claim 1 recites providing a visible user input interface at a displayed location relative to the field. The user input interface is separate and distinct from the input field that was first evaluated, thus, quite different from the system taught by Schlimmer; an entirely new user input interface is displayed as opposed to merely expanding the field as is taught by Schlimmer.

Further yet, claim 1 recites the user input interface is operable to receive handwritten data while the field is operable to receive input data. That is, the user has the option of either entering textual data in the underlying input field via typing or entering handwriting data in the overlying user input interface via handwriting. Schlimmer is completely silent to typing data into any field because Schlimmer is directed toward a handheld computing environment that was not designed to have any keyboard input methods. Thus, Schlimmer cannot possibly be construed to teach that the user input interface is operable to receive handwritten data while the field is operable to receive input data since there is only one way to enter data into the computing environment in the method of Schlimmer.

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For at least the foregoing reasons, applicant submits that claim 1 is allowable over the prior art of record.

Applicant respectfully submits that dependent claims 2, 6, 9-12, 14-15, and 17, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Schlimmer fails to disclose the recitations of claim 1 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 2 recites that the visible user input interface is semi-transparent. That is, the underlying field in which the user input interface lies over is still visible through the user input interface. In this manner, the user may still see typed data as it is typed if the user chooses not to use the overlying user input interface via handwriting. Schlimmer, however, does not teach in any way a semi-transparent field. Nowhere in the teachings of Schlimmer is it suggested or even appreciated the benefit of having a semi-transparent field overlying an input field. Schlimmer merely teaches expanding the input field when double-tapped, but does not teach or show any indication that the expanded input field is semi-transparent. Applicant submits that claim 2 is allowable over the prior art of record for at least this additional reason.

As another example, claim 10 recites evaluating at least one window attribute corresponding to the field comprises accessing window class information. Nowhere in the teachings of Schlimmer is there any mention or appreciation of the

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concept of window class information, let alone a teaching of this concept. Schlimmer simply teaches expanding an input field when double-tapped and does not show any capability of assessing window attributes or window class information. Applicant submits that claim 10 is allowable over the prior art of record for at least this additional reason.

Turning to the next independent claim, claim 18 recites in a computing device having a program, a system comprising user input interface code, a field typing engine configured to evaluate a field of the program, determine if that field is supported by the user input interface code, and if so, to communicate information to the user input interface code, the user input interface code drawing a visible input area to indicate that data may be entered therein, the drawing of the visible input area based on the information received from the field typing engine, and a recognition engine that receives entered data from the user input interface code and converts the entered data to a recognition result that is made available to the program by the user input interface.

The Office action rejected claim 18 as being anticipated by Schlimmer. The Office action cited the same small section of Schlimmer (section 2, pages 330 and 331) that was put forth and detailed above with respect to the rejection of claim 1. Applicant respectfully disagrees.

As discussed above, Schlimmer is merely an example of an application that has a handwriting data recognition engine already part of the entire application. As such, the input field must be expanded by a user double tapping a field into which it is desired to have data entered. To the extent that Schlimmer teaches a

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handwriting recognition system, it merely teaches one that may have data entered into its own application. That is, the program of Schlimmer cannot be applied to an entirely separate application such that handwriting recognition can be extended to any program having an input field.

Schlimmer does not teach or even show any appreciation of the concept of evaluating a field of a program to determine if that field is supported by a user input interface code, and if so, communicating information to the user input interface code such that the user input interface code may draw a visible user input interface as recited in claim 18. At best, Schlimmer teaches expanding an input field when a user double-taps an input field such that the input field expands for the user to enter handwriting data. Expanding an input field after a user-initiated double-tap is not the same as evaluating a field for its ability to receive an input and then drawing a visible user input interface in response to that determination. For at least the foregoing reasons, applicants submits that claim 18 is allowable over the prior art of record.

Applicant respectfully submits that dependent claims 19-20, 23, and 25-29 by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 18 and consequently includes the recitations of independent claim 18. As discussed above, Schlimmer fails to disclose the recitations of claim 18 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 18 noted above, each of these dependent claims includes additional patentable elements.

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Claim Rejection under §103

The Office action rejected claim 3-5, 7-8, and 16 as being unpatentable over Schlimmer in view in Frink. Applicant respectfully submits that dependent claims 3-5, 7-8, and 16 are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Schlimmer fails to disclose the recitations of claim 1 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements which render these claims patentable over Schlimmer and Frink, whether considered alone or in any permissible combination.

For example, claim 3 recites the method of claim 1 wherein the handwritten data received at the user input interface is evaluated to determine whether the handwritten data corresponds to a gesture. The Office action contends that Schlimmer, when combined with Frink discloses the recitation of claim 3 because one would have been motivated to make such a combination in order to allow users to easily edit the comments, thereby reducing the confusion of mixing up editing commands and data input by the user. Applicant respectfully disagrees.

Schlimmer, as a reference, is a very limited disclosure of a system and method for inputting data to a computing environment. Schlimmer does not show any teachings of the manner in which handwriting is recognized, the manner in which handwriting is converted to text, or the manner in which all data is stored, maneuvered, and manipulated. In short, Schlimmer does not adequately teach much of anything outside of the scope of its study directed toward the speed at

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which data may be entered. As such, Schlimmer, as a whole, lacks any motivation whatsoever to be combined with other references outside other studies of data entry speed. Certainly, nowhere in Schlimmer can there be found any suggestion that handwriting recognition system may also recognize gestures as handwriting.

As a matter of law, obviousness may not be established using hindsight obtained in view of the teachings or suggestions of the applicants. *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). To guard against the use of such impermissible hindsight, obviousness needs to be determined by ascertaining whether the applicable prior art contains any suggestion or motivation for making the modifications in the design of the prior art article in order to produce the claimed design. The mere possibility that a prior art teaching could be modified or combined such that its use would lead to the particular limitations recited in a claim does not make the recited limitation obvious, unless the prior art suggests the desirability of such a modification. See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Applicant submits that claim 3 is allowable over the prior art of record, whether considered alone or in any permissible combination.

The Office action also rejected claims 21 and 22 as being unpatentable over Schlimmer in view in Frink. Applicant respectfully submits that dependent claims 21 and 22 by analysis similar to the analysis discussed above with respect to claim 18, are allowable. Each of these claims depends either directly or indirectly from claim 18 and consequently includes the recitations of independent claim 18. As

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discussed above, Schlimmer fails to disclose the recitations of claim 18 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 18 noted above, each of these dependent claims includes additional patentable elements which render these claims patentable over any permissible combination of the prior art of record including any permissible combination of Schlimmer and Frink.

Turning to the last independent claim, claim 30 recites in a computer system having a graphical user interface, a system comprising an application program having at least one application input area into which user input data can be entered, user interface code external to the application program, a typing engine that determines whether to call the user interface code for a selected application input area of the application program based on attribute information associated with that application input area, the user interface code providing a semi-transparent input area based on the attribute information when called, a timing mechanism configured to cause removal of the semi-transparent input area when no user interaction with the visible input area is detected for a period of time, a gesture engine, the gesture engine invoked to determine whether user input data directed to the semi-transparent input area is a gesture directed to the application program or information that should be recognized as text, and a handwriting recognition engine, the handwriting recognition engine configured to receive the information that the gesture engine has decided should be recognized as text, the handwriting recognition engine responding by returning recognized text when provided with the information.

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The Office action rejected claim 30 as being unpatentable over Schlimmer in view of Frink. More specifically, the Office action contends that Schlimmer teaches several of the recitations of claim 30 and refers to the limited section of Schlimmer as discussed previously (section 2, pages 330 and 331). However, the Office action correctly acknowledges that Schlimmer does not teach a timing mechanism and a gesture engine as recited in claim 30. To that end, the Office action contends that Frink does teach these recitations and that it would have been obvious to a person skilled in the art at the time the invention was made to combine the teachings of Schlimmer with the teachings of Frink because such a combination allows a user to easily edit documents thus reducing the confusion of mixing up editing commands and data input. Applicant respectfully disagrees.

As discussed above, Schlimmer, as a reference, is a very limited disclosure of a system and method for inputting data to a computing environment. Schlimmer does not show any teachings toward the manner in which handwriting is recognized, the manner in which handwriting is converted to text, or the manner in which all data is stored, maneuvered, and manipulated. In short, Schlimmer does not adequately teach much of anything outside of the scope of its study directed toward the speed at which data may be entered.

Certainly, Schlimmer does not teach a typing engine that determines whether to call the user interface code for a selected application input area of the application program based on attribute information associated with that application input area, the user interface code providing a semi-transparent input area based on the attribute information when called as recited in claim 30. At best, Schlimmer

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teaches expanding an input field when a user double-taps a tab in the field such that a user may enter handwriting data. By any stretch, the teachings of Schlimmer cannot be construed to teach a semi-transparent input area based on the attribute information.

Furthermore, Schlimmer, as a whole, lacks any motivation whatsoever to be combined with other references outside other studies of data entry speed. Certainly, nowhere in Schlimmer can it be found any suggestion that handwriting recognition system may also recognize gestures as handwriting. Applicant submits that claim 30 is allowable over the prior art of record, whether considered alone or in any permissible combination.

The Office action rejected claims 31-33 as being unpatentable over Schlimmer in view in Frink. Applicant respectfully submits that dependent claims 31-33, by analysis similar with respect to claim 30, are allowable. Each of these claims depends directly from claim 30 and consequently includes the recitations of independent claim 30. As discussed above, Schlimmer fails to disclose the recitations of claim 30 and, therefore, these claims are also allowable over the prior art of record. In addition to the recitations of claim 30 noted above, each of these dependent claims includes additional patentable elements which render these claims patentable the prior art of record, whether considered alone or in any permissible combination.

For at least these additional reasons, applicant submits that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the

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rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

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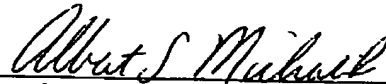
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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-33 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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